Book Reviews

The Western Journal of Medicine *does not review all books sent by publishers, although information about new books received is printed elsewhere in the journal as space permits. Prices quoted are those given by the publishers.*

RECENT ADVANCES IN DIABETES—No. 1—Edited by Malcolm Nattrass, MB, ChB, PhD, MRCP, Consultant Physician, The General Hospital, and Senior Clinical Lecturer, The University of Birmingham, Birmingham, United Kingdom, and Julio V. Santiago, MD, Professor of Pediatrics and Medicine and Associate Director, Diabetes Research and Training Center, Washington University School of Medicine, St Louis. Churchill Livingstone, Inc, 1560 Broadway, New York, NY 10036, 1984. 254 pages, $35.00 (softbound).

Although the editors point out the difficulty in selecting topics in a field in which advances have been as prolific as in diabetes mellitus, they do an extraordinarily fine job.

As a result, there is an excellent balance between the clinical and the scientific which should be attractive to diabetologists, endocrinologists and others with a particular interest in diabetes.

While there is considerable chapter-to-chapter variation in terms of completeness and depth, topics which hold the most interest currently are generally well represented and thoroughly but concisely presented. Bibliographies are up-to-date and useful to the reader who seeks an overview of today's clinical state-of-the-art and research which seems to promise further sweeping changes in diabetes care.

Particularly notable is the editors' goal to bring attention to and stimulate interest in a number of subjects which have not been stressed in the popular literature. Among these are alterations in bone and calcium metabolism in diabetes, the platelet and third phase of coagulation in diabetes and nonspecific glycosylation of proteins in diabetes mellitus.

Other chapters are to be commended. The discussion of exercise in diabetes recognizes the growing awareness of the importance of this factor and explores, albeit briefly, the development of the understanding of the physiology of exercise in health and in diabetes.

Glucose counterregulatory mechanisms also assume increasing importance as efforts are intensified to normalize blood glucose levels. Although many questions remain to be answered regarding these mechanisms, our present knowledge is reviewed with unusual clarity by the author of this chapter.

This is the first volume of a proposed series. If its quality portends that of future editions, we can look forward to a valuable addition to diabetes literature.

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ECHOCARDIOGRAPHY—AN INTEGRATED APPROACH—Stephen Arvan, MD, Assistant Professor, Department of Medicine, University of Pittsburgh School of Medicine, and Head, Noninvasive Unit, Montefiore Hospital, Pittsburgh. Churchill Livingstone, Inc, 1560 Broadway, New York, NY 10036, 1983. 503 pages, $60.00.

This book represents an attempt by the author and four contributors to present an "integrated" approach to undersanding clinical echocardiography. In consonance with this approach, the author includes not only high-quality M-mode and two-dimensional echocardiographic examples of normal and abnormal clinical cardiac conditions, but also briefly compares the uses of echocardiography and radionuclide angiography. Furthermore, chapters on cardiac arrhythmias/conduction disturbances and phonoechocardiography feature nice correlations between echocardiography and other noninvasive modalities.

The outline of the book follows a relatively traditional approach, with the first chapter describing the principles of cardiac ultrasound, techniques for performing the echocardiographic examination, standard imaging views and potential imaging artifacts. There is also a brief introduction to Doppler echocardiography. After a brief comparison of echocardiographic and radionuclide techniques in the evaluation of left ventricular function, there are chapters on coronary artery disease, acquired valvular disease, pericardial disease, cardiomyopathy, endocarditis and left ventricular masses. The text in these chapters is well-written and the echocardiographic figures are excellent. The chapter on congenital heart disease is especially useful for cardiologists or internists treating adults who would like a brief illustrative review outlining the major congenital heart diseases. Also, the chapter on prosthetic heart valves provides an excellent reference for those of us involved in interpreting the often confusing and subtle echocardiographic findings on these valves.

In addition to the nice features, there are a few limitations to this book. First, there is no attempt to describe some of the newer, not well-established applications of cardiac ultrasound—such as three-dimensional reconstruction and tissue characterization. Second, the discussion of Doppler echocardiography is rudimentary and outdated. The few Doppler figures included throughout the book were unfortunately produced using older Doppler technology without spectral display. Therefore, these figures cannot give the reader an adequate picture of the information which the Doppler technique currently adds to the ultrasound examination. Furthermore, the author states in his first chapter that "quantitation of flow velocity or volume flow is unreliable" by the Doppler technique. This statement is presumably based on the older technology and does not reflect many recent reports attesting to the utility of Doppler echocardiography for this application. Third, there are only brief allusions to contrast cardiac echocardiography in the book. Finally, the "Table of Normal Values" in the Appendix is apparently based on a small number of subjects and does not give normal M-mode values corrected for age; also, no normal values are included for two-dimensional parameters.

Despite these limitations, I believe that this is a valuable book for those who are interested in the basic principles and clinical applications of echocardiography.

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KNEE PAIN AND DISABILITY—2nd EDITION—Rene Cailliet, MD, Professor and Chairman, Department of Rehabilitative Medicine, University of Southern California, School of Medicine, Los Angeles. F. A. Davis Company, 1915 Arch St., Philadelphia, PA 19103, 1983. 177 pages, $11.95.

This is one of a series of books written by Dr Cailliet on the subject of musculoskeletal pain and disability. It is a revision of the first edition, which was published in 1973, and is intended to acquaint nonorthopedic health practitioners with the more common causes of knee problems.

Dr Cailliet is at his best when discussing the structural and functional anatomy of the knee, which takes up the first quarter of the book. The text is easy to read and is aided by a liberal number of clear, schematic drawings. Although recent developments in musculoskeletal biomechanics call into question some

of Dr Cailliet's assertions regarding the functional role of various structures, he is, for the most part, accurate. This section of the book represents a good description of the many components of the knee which, through either dysfunction or injury, can lead to disability.

The rest of the book is composed of a series of chapters outlining the major traumatic, inflammatory, degenerative and neuromuscular affectations of the knee. The chapter on the patellofemoral joint is excellent, explaining the mechanisms by which this structure becomes the most common cause of knee pain. The portion of each chapter pertaining to the rehabilitation of disabled knees is also quite good, reflecting Dr Cailliet's vast experience as a recognized rehabilitation expert.

The sections on diagnosis and treatment are of more variable quality. It is a bit disappointing that many of the advances of the last ten years are not included here. Nowhere is mention made of the proper significance of the acute hemarthrosis, now recognized to be highly correlated with anterior cruciate ligament tears and osteochondral fractures. The Lachman test—the most sensitive physical diagnostic sign of anterior cruciate ligament integrity—is not described. There are occasional other instances where salient points of diagnosis are overlooked or misstated.

Treatment is similarly presented in an outdated manner. Dr Cailliet states that his goal is not to discuss the details of definitive treatment, but much of the text is devoted to this. Perhaps it would be best to have omitted this completely rather than present it inaccurately. His description of the treatment of fractures about the knee is unchanged from the first edition, detailing techniques no longer used. The arthroscope has become a primary tool in the diagnosis and treatment of intra-articular pathologic processes, and is not mentioned. In discussing rheumatoid arthritis, Dr Cailliet states that, "Total knee replacements have not been proven in the number done and duration of their use to be recommended." While possibly true in 1973 (the same quotation appears in the first edition), this is clearly not the case now.

It is indeed difficult to write a specialty book intended for nonspecialists. The tendency is to either include too many details for the general audience or to make too superficial a presentation, risking accuracy. As an introductory text for those unfamiliar with the knee, this book can be conditionally recommended for the purpose of acquainting them with the anatomic structures and diagnostic possibilities. However, it cannot be recommended for those who wish a current, concise discussion of the knee in a single source.

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HIRSUTISM AND VIRILISM—PATHOGENESIS, DIAGNOSIS AND MANAGEMENT—Edited by Virendra B. Mahesh, Regents' Professor and Chairman, and Robert B. Greenblatt, MD, Professor Emeritus, Department of Endocrinology, Medical College of Georgia, Augusta. John Wright • PSG Inc., 545 Great Road, Littleton, MA 01460, 1983. 394 pages, $49.50.

This book deals with common and rare androgenizing disorders of women and children. These disorders may be managed by various specialists, including endocrinologists, gynecologists, dermatologists and geneticists. It has much to offer.

In the past few years, there has been considerable advance in understanding the biochemical mechanisms involved in hirsutism and virilism. Knowledge of the physiology of gonadal differentiation, sex-steroid secretion and metabolism in various target tissues and sex-steroid receptor interaction that produce biochemical responses has increased considerably. Much of this new information has been extrapolated to explain the pathophysiology of hirsutism and virilism in women and children. The primary biochemical defect for the common causes of hirsutism—polycystic ovary disease and idiopathic hirsutism—are poorly understood. These disorders probably represent a group of various defects with a common clinical expression. The authors of these chapters clearly struggled with the current lack of a satisfactory explanation of the pathophysiology. The biochemistry of the excess hair growth can be explained quite well in these patients from what is known about sex-steroid metabolism and androgen action. What is poorly explained is why these patients produce excess androgens or respond to them excessively. In general, the areas of controversy are carefully outlined and satisfactorily discussed.

There are some errors in the book and some new areas of knowledge that have been omitted. In the chapter on Cushing's syndrome, for example, there are misstatements about factors that modify the metabolism of dexamethasone. It is stated that dexamethasone suppression tests may give abnormal findings in obesity because the clearance of dexamethasone is increased in obesity and the plasma half-life of the steroid is reduced. Extensive experience and published data do not support this statement. Also, the statement that estrogen therapy increases the metabolism of cortisol and dexamethasone is incorrect. The book is devoid of data on newly described androgen markers of hirsutism: plasma 3α-androstanediol and 3α-androstanediol glucuronide.

There are also some oversights in the book. The metabolism of sex steroids in skin and hair follicles is not covered satisfactorily. Data on receptor characteristics of hair follicles and various regions of skin should be covered as a single topic. Information on the incidence of hirsutism and virilism in various populations is also not discussed in any detail. The book could be improved by discussing practical approaches to evaluation of many of the disorders described. The approaches presented are mainly at the level a specialist could interpret, but not a generalist.

Despite these limitations, the book will make a substantial contribution as a reference source for medical students and housestaff who care for patients with these disorders. The authors have many years of experience in managing patients with these disorders and have made numerous contributions to the literature on these subjects. It will be a welcome addition to medical school libraries and the libraries of endocrinologists, dermatologists and those physicians in obstetrics and gynecology and pediatrics who care for patients with disorders of either hirsutism or virilism.

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PEDIATRIC EPILEPTOLOGY—CLASSIFICATION AND MANAGEMENT OF SEIZURES IN CHILDREN—Fritz E. Dreifuss, MD, FRCP, FRACP, Professor of Neurology, School of Medicine, University of Virginia, and Director, Comprehensive Epilepsy Program, Charlottesville. John Wright • PSG, Inc, 545 Great Rd, Littleton, MA 01460, 1983. 295 pages, $35.00.

The text is a collection of treatises incorporated within 295 pages. More than half of the chapters are written by the editor, Fritz E. Dreifuss. Information is organized into three subject areas. The first three chapters serve as an introduction covering classifications of seizures, a brief description of the genetics of epilepsy and a review of electroencephalographic findings in seizures and epilepsy.

Since 1964 a vigorous international effort has been made to develop an acceptable classification of seizures. The classification is based upon seizure type—that is, partial, generalized and unclassified with subsets of those major categories. The seizure types are separated by their clinical expression, characteristic electroencephalographic findings and, to a lesser extent, site of origin. The latter is much more difficult due to the lack of knowledge regarding the functional anatomy of the brain.

The chapter on the genetics of epilepsy shows the powerful influence of inheritance upon the occurrence of seizures. Study of the genetics of epilepsy is hampered by absence of gene, protein or enzyme markers to follow transmission of the trait through a family.

Dr Soo K. Kee provides a remarkably concise description of the electroencephalographic characteristics of seizures and epilepsy.

The second area of subject material describes, in 11 chapters, the individual seizure types—that is, absence, generalized tonic-clonic seizures, infantile spasms, myoclonic seizures, Lennox-Gastaut syndrome, partial seizures (simple and complex), neonatal seizures, sensory-evoked seizures and status epilepticus. The authors strive mightily to clearly differentiate among the seizure types, especially partial seizures, absence, myoclonic and infantile spasms. This is a difficult task because these seizure types are